

V. A short Account of the Anomalous Epidemic Small-Pox, beginning at Plymouth in August 1724, and continuing to the Month of June 1725. By the Learned and Ingenious Dr. Huxham, Physician at Plymouth.

THE *Small-Pox* were preceded by the usual Symptoms of that Distemper; but the Pains of the Limbs, and Back, were generally more severe than common, as were likewise the *Nausea* and Vomiting. Abundance were seized with violent Colick Pains, which would leave them upon the Eruption, or after a Clyster or two, with a gentle Anodyne: The Stools were commonly bilious.

It sometimes happen'd, that the Symptoms would not seem very severe before, and at the Eruption, and yet the Pox would prove very confluent and fatal at the State.

The *Pustules* were very small, and did not regularly fill; but, in a Day or two after the Eruption, would flat and be deprest'd in the Middle. I observ'd this even in the distinct Kind. In some Persons they appeared in less than 24 Hours from the Seizure: When they broke out so very soon, they were always of the Flux Kind, as is commonly observed. The Eruption was attended with prodigious Sneezing, especially in Children. I saw one \* Child about five Years old, that sneezed incessantly for more than 30 Hours, nor could it be allay'd, but by Anodynies. This Child had the *Confluent Pox*, and dy'd the 13th Day. In some, at, and after the Appearance of the

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\* Mr. Cockey's Child.

Pustules, they would itch most intolerably : This happen'd also to the Child now mentioned, and was generally a bad Symptom ; as it was an Argument of the great Acrimony of the morbific Matter.

In some few, a Day or two after the Eruption seem'd to be compleated, there would appear in the Interstices of the Pox several miliary Pustules, some of a dark Red, others filled with a limpid Serum : These never came to Suppuration, as the secondary Crop of *Small-Pox*, which I have now and then observ'd, sometimes do; nor were they as large. Tho' this is an ill Symptom in general, yet, in a\* Girl of seven Years old, I perceiv'd her Fever and *Delirium* go totally off upon this Eruption, and the Urine immediately settled.

Some had abundance of Purple *Petechia* appear among the Pox at the Eruption, and the Pustules would look of a lurid Hue : In others, the Purples would not discover themselves, till the Maturation. I knew but † one Person that had these Spots, during this Constitution, that surviv'd the Distemper ; but some dy'd the 5th or 6th Day, some dwindled on till the 10th or 11th.

During the Suppuration, the Pox would become very sessile, and the coherent Kind would enlarge their Bases exceedingly ; so that, though they seem'd for some Time after the Eruption to be very distinct, they would now flux together. A Purple Speck would often appear in the Center of the Pustules, which would spread and grow blacker and blacker by degrees. The Interstices would also sometimes turn pale, sometimes livid. Symptoms of very ill Omen ! The Pustules, that had not the Purple Speck, did not incrust

\* Miss Spurrel.

† Mr. Lang's Son.

incrust yellow, but appear'd of a dead, ash Colour, and by degrees grew into a dark black Crust.

The Salivation, which constantly ought to accompany the Maturation in the *Confluent Small-Pox*, was in several very inconsiderable, in some none at all, saving a very small Quantity of extremely viscid Matter, which was got off by syringing. I had two adult Persons, and some Children, labouring under the confluent Sort, who neither salivated, nor purged, except when some lenient Catharticks were given them ; and yet they got over the Distemper. Indeed, it was very rare, that we should find Children have that gentle *Diarrhoea* which *Sydenham*, and others justly reckon, supplies the Salivation in Persons of more advanced Age. Some very young Children, on the contrary, drivell'd exceedingly through the Course of the Distemper. In \* two Children, one of five, the other of seven Years old, no Salivation came on till after the 13th Day, and then it was so profuse, and continued so long, that it was with Difficulty I put a Stop to it by Purges first, and then by the Bark, Astringents, &c. To the younger of these, indeed, I had given *Calomel*, Gr. iv, but it was soon purged off.

Where the Swelling of the Face and Throat was very hard, painful, and tense, with a strong Vibration of the carotid Arteries, and little or no Salivation, the Patients generally grew delirous at the State. These Symptoms frequently prov'd fatal. The maxillary and parotid Glands, of those that recover'd, would remain swoln and indurated for a considerable Time after the intire Desquamation of the Pox, (though that was very slow) nor would these Tumors go off, but after repeated Purging, and that with *Calomel*, &c.

Those Tumors were undoubtedly the Consequence of a very viscid Matter obstructing those Glands, which harden'd the Swelling of the Face, hinder'd the Salivation, and in some Measure, the Circulation through the external Carotids ; by which Means, more Blood being forc'd through the Internal, an Inflammation of the Brain, and a *Delirium* might be partly brought on ; and this happening too, when the Blood was fraught with acrimonious Matter absorb'd from the Pustules, render'd the *Delirium*, at that *Stadium* of the Disease, vastly more to be dreaded than in the *Apparatus*, when it happen'd almost of course. Under these Circumstances, Bleeding, emollient Clysters, Ecoproticks, plentiful Dilution, were absolutely necessary.

On this Occasion it may be ask'd, whether or no, the Salivation being very viscid and defective, the Tumor of the Face hard and tense, some Mercurial (as a duly prepar'd *Calomel*) might not be given with Advantage, even in the State of Maturation ? (I have frequently given *Cinnabar* to good Purpose). There are some Instances that would seem to justify such a Practice ; and I know but one material Objection to it, and that is, that the Weight of the Mercury would, by increasing the Moment of Motion of the Blood, augment the Fever ; but surely we have given *Calomel* after the Incrustation, when the secondary Fever hath subsisted without any Manner of ill Consequence, I might say, with great Success.

Nothing so certainly fuseth viscous, tough Humors, being join'd with plentiful diluting Liquors, as this, and so prepares them to be discharg'd by proper Outlets. As to *Oxymel Scillit*. Syringing, and the like, in a defective Salivation ; the former, indeed, by Puking, sometimes irritates the Glands of the *Membrana*

*brana Schneideriana* to discharge their Contents ; Syringing barely deterges the Mouths of the *Ductus Salivares* : Either have little certain Effect further ; whereas the viscous obstructing Matter is lodg'd in the inmost Glands, and even in the Blood itself.

This Method seems peculiarly adapted to such an *Epidemic Small-Pox*, as I am now describing, in which we had all the Indications imaginable of a very viscid State of Humors. The Blood, when drawn, was always excessively viscous, especially at the State of the Disease : Frequently there was little or no Salivation ; generally it was extremely glutinous ; so that the Nurses were many times obliged to pull the Matter out of the Patient's Mouth with their Fingers ; and without drinking very plentifully, it would soon cease. A *Diarrhoea* very seldom happen'd to Children. The Blisters soon dry'd up. I heard of no one, during this Constitution, that made bloody Urine. Where that dreadful Symptom happens, the *Crasis* of the Blood seems to be dissolv'd, (as *Lyster* well observes) ; on the contrary, the recited Symptoms argued a too compact and viscous *Diaphesis* of the Blood.

This State of the Humors, during this Constitution, might, in part, at least, depend on the extraordinary Dryness of the Season, and the almost constant Northerly and Easterly Winds, which we had in the Months of *October, November, February and March* last. From the Middle of *January* to the Middle of *April*, was a drier Season than ever was known in this Country, where we have certainly, in general, more continu'd Rain than in most Places in *England*, *Plymouth* being infamous for wet Weather.

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This remarkable Change of the Temperature of the Air must undoubtedly have some considerable Effect on human Bodies : A very cold Wind suffering only the thinner Part of the Blood to pass off by Perspiration : Nor, in such Seasons, doth the Body imbibe so much of a diluting Humidity from the Air (as *Keil* observes). Hence the Necessity of drinking plentifully of thin diluting Liquors, which, as it is always proper in this Distemper, so, when it happens in such a Season, is highly necessary. And I am of Opinion, Mons. *Andry*'s Method of bathing in warm Water and Milk, or warm Milk, before the Eruption, may, upon many Accounts, be proper in such a Constitution of the Air. There can be no Objection against it, but its not being in Fashion.

I took particular Notice, that while, and just after the Easterly Winds blew excessively strong for seven or eight Days together in the Months of *October* and *November*, the Patients, I then saw in the *Small-Pox*, scarce salivated at all. Then particularly, \* an adult Person, who had the *confluent Pox* very severely, did not spit the least through the whole Course of the Disease ; She was seized with a violent *Pleurisy* the 18th Day, but was reliev'd by Bleeding. The Blood was the most viscid that ever I saw. 'Tis remark'd by *Lancisi*, that People expectorate very little in Disorders of the Breast, when cold, dry, Easterly Winds blow ; and 'tis what I have frequently observ'd : And this may be one Reason, why some *Astmaticks* generally suffer a Paroxysm at such Seasons.

The Swelling of the Hands did not so regularly succeed the *Detumescence* of the Face, during this Constitution, as I have observ'd in other *Epidemic Small-Pox*.

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\* *Betty Boddy.*

*Pox.* Some had very small, or rather no Tumors at all. 'Twas very rare the Legs and Feet swell'd, till after the Patients sat up, and then they had much Pain in the Parts.

I have often reflected upon it, whether the Succession of the Tumors of the Hands, to that of the Face, might not partly depend on the later Inflammation and Suppuration of the Pustules of those Parts : The Pain and Inflammation being a *Stimulus* determining the Humors to the pained Part : And 'tis particularly to be observ'd, that the greatest Pain of the Hands and Arms commonly happens at the Time, when the Salivation begins to cease : So that the Tumor of the Hands may, in some Measure, prove a *Succedaneum* to the Spitting. It is the common Observation, that the Pustules of the Arms and Hands inflame and mature a Day or two later than those of the Face, and those of the Legs and Feet latest, which may also be the Reason, that the Tumor of the Legs succeeds that of the Hands. I have been the rather inclin'd to this Opinion ; inasmuch as I have sometimes observ'd a considerable Swelling of the Hands (the Pustules being very painful and inflam'd) and that too in the distinct Kind, when there hath been little or none in the Face. Generally the more painful a Boil is, the greater the Tumor around it ; and by consequence, the Tumor of a Part is in proportion to the Painfulness of the Boils, and their Number.

From this, I would enforce the Use of Epispasticks apply'd above the Wrists, a little before the Time we expect the Tumor of the Hands should arise, (especial-ly when Symptoms are threat'ning) as they are *stimuli* to be depended on, not only attenuating and deriving the Humors to the Parts, but also discharging them, and so proving a convenient Outlet to the morbidick

Matter, which before was thrown off by the (now partly suppress'd) Salivation.

Blisters apply'd to the Neck frequently relieve the extreme Pain of the Throat, and Difficulty of swallowing which are sometimes exceeding troublesome to the Patient in the third *Stadium* of the *Small-Pox*, by drawing the Humors another Way. Nay, in some, where Vesicatories have been early apply'd, and continu'd to run extreamly, there hath been less Swelling, and less Salivation, than seem'd proportionate to the Vehemence of the Distemper, but without any Disadvantage to the Patients ; the Running of the Blister supplying the Defect of the Spitting. It seems then but reasonable, when we expect the Translation of the noxious Humor to the Hands which is what Nature itself affects, to endeavour to promote its Flux thither, and give it Vent.

How advantageous Discharges of this Nature may be, I had Occasion some Years since to observe in the Case of a Lady, for whom I was concern'd, together with that worthy and ingenious Physician Dr. *Seymour* of this Town ; where, through the prodigious Discharge of Blisters apply'd to her Neck, Ears, and Arms ; as likewise a plentiful Flux of Urine, she neither swell'd, nor salivated, through the whole Course of a very dangerous, *confluent Small-Pox*, and yet recover'd.

Any Person, that hath been conversant in Practice, cannot but have observ'd Translations of the morbid Matter from one Part to another sometimes of the greatest Service, especially where it hath had a Discharge. (Indeed, all critical Evacuations are of this Nature). But I mean, how often hath a Boil, an Impostume, or Swelling of the Limbs, been the evident Means of terminating a Fever ? This I experienc'd particularly

particularly in myself, several Years since at *Paris*; when labouring under a violent, inflammatory Fever with *Delirium*, the 9th Day towards Night, I was feiz'd with excessive Pain in my Arms and Hands, upon which I bath'd my Hands a long Time in warm Water, by Persuasion of two worthy Gentlemen of the Faculty, now living, who were then my Fellow Students, and watched by me. In a little Time my Hands began to swell, and in 4 or 5 Hours my *Delirium* and Fever went off intirely, tho' my Hands remain'd swoln and pain'd for some Time.

If Nature, therefore, in some Cases, take such extraordinary Methods to free herself from Diseases, how intent ought we to be in promoting her Operations, in a Distemper, where the *Metastasis* of the morbific Matter to the Hands and Feet is generally regular and salutary. 'Tis, undoubtedly, upon this View, that *Baglivi* orders Sponges soak'd in a warm emollient Decoction, to be apply'd to the Hands and Feet in the *Small-Pox*: And this, he saith, he hath done with great Success. I have seen no less from Blisters maturely apply'd to the Arms and Legs; but then I order'd the Patients to drink plentifully of a thin Whey, or the like, which takes off, in great Measure, the Acrimony of the *Cantharides*.

Before I conclude this Paragraph, I cannot but observe, that the *Delirium*, attending the Eruption of the *Small-Pox*, is very much alleviated by the Application of emollient Cataplasms to the Feet, in Children especially. 'Tis, indeed, what I do commonly of course apply, when I am consulted at the Beginning of the Distemper, and I think I have had Reason to imagine, in many Cases, that it hath been a Means of deriving the variolous Matter that Way; and, by making the Erup-

tions more copious in the lower Parts, the Face and Breast have suffer'd less than, I had Reason to fear, otherwise might have happen'd. The great Tenderness of the Feet, which happens after their Application, is a trifling Disadvantage, in Comparison of the Benefit may be receiv'd by them ; and so are those shooting Pains, which often affect the Legs on the Use of those Cataplasms : Not to say, that these are rather an Argument of the Benefit arising from their Use.

In the *confluent Kind*, generally a *Micturition* and *Dysury* came on about the 12th, or 13th Day ; and that when there were no Bilsters apply'd. If a large Quantity of turbid Urine follow'd, it was soon succeeded by Urine, which depos'd a very large Sediment ; but if it prov'd thin and limpid, and in small Quantity, a *Delirium*, *Tremor*, *Subsultus Tendinum*, and other convulsive Symptoms, soon follow'd.

There were no Symptoms so certainly fatal at the Turn of these *Small-Pox*, as a *Delirium*, and (what is, I think, of constant ill Omen in all Kinds of eruptive Fevers at the State) a *Dyspnæa*, or the *Anhelosa Respiratio* : If we bled upon the first Appearance of them, we frequently sav'd our Patient ; the Omission of which a few Hours made the Case irrecoverable.

It was very common in Persons afflicted with these *Pox*, that 8, or 10 Pustules would run together, and form a large Vesication full of a limpid, crude Matter, which would continue so several Days after the Incrustation. \* In one that dy'd, I saw Mortifications under these Bladders. I thought it necessary to let out this Matter with a Lancet, or Needle, as soon as possible, lest it should, (as it did when left to itsel) cause an Ulceration ;

ceration ; and I could not but believe it proper, inasmuch as the Thinness of the Matter render'd it capable of being absorb'd into the Mass of Blood, and that the longer it lay, the more acrimonious it would grow, it not admitting of Concoction.

In two Patients, I saw several of the Pustules fill'd with a bloody *Sanies* : I was surpriz'd to find \* one of them get so easily over the Distemper, tho' she labour'd also under the Flux Kind.

The Desquamation was very slow, the black Crusts adhering several Days, nay Weeks, after the Turn, while abundance of purulent Matter gleeted from under them. These left very ugly *Cicatrices*. No Application seem'd to me to have a better Effect, in this Case, than frequently fomenting the Parts with warm Milk, or Milk and Water ; this diluted the acrid Salts, wash'd them off, and soften'd the Skin : Oily Liniments, by stopping the Pores, are frequently hurtful.

In a Case or two I observ'd a Repullulation of Pustules under the Crusts in the Face and Hands, when thrown off. This particularly in the Boy, that recover'd with Purple Spots. The latter were distinct, tho' the former were in the greatest Degree confluent.

Nothing so certainly abated, and took off the secondary Fever after Bleeding, (if indicated) as gentle Cathartics ; such as *Rhubarb*, *Manna*, *Tartar*, *Infus. Senn.* and the like. The hot, scammoniate, aloetic Purgers seem not so proper, at least, to begin with. These I gave the 10th, 11th, 12th, or 13th Days, if I found the Patient have a quick Pulse, feverish Heat, dry Tongue, Head-ach, restless Anxiety, and other Symptoms of the putrid Fever. Some one, or other of these, being once or twice repeated, I gave *Calomel*, and purg'd it off. This was our general Method, and the most successful.

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I cannot but think the World highly oblig'd to the most learned Dr. *Friend*, and the other noble Ornaments of our Faculty, that have introduc'd, and wrote in Favour of, this Method. In the Beginning of my Practice, relying upon the Authority of *Morton*, I gave the *Cortex* to check the seconday Fever ; especially when I found it (as is very frequent) evidently intermit ; but I cannot say with a Success any way answering my Expectation : Not but that after due Purging, the *Bark* is very proper to extinguish the hectic Disposition of the Blood, which is frequently the Consequence of the *Small-Pox*, to which, if a cool Regimen, and Asses Milk (where no *Idiosyncracy* forbids it) be subjoin'd, we have done, perhaps, as much as lies in the Power of Physick.

By this Method of early Purging, in the *coherent* and *confluent Pox*, I have seen several rescued from the most imminent Danger, whose Recovery look'd rather like a Resurrection.

This, surely, is the only Way of cleansing the *Primæ Viæ* stuff'd with a Load of foetid, acrid Impurities thrown off by the Glands of the Guts, which cannot be suppos'd to cease from their Office, during the Course of this Distemper : And forasmuch as the Pores of the Skin are at this Time very much constipated by the incrusted Pustules, 'tis reasonable to believe, the Glands of the Guts rather separate more than usual ; it being an allow'd Maxim in Physick, That the Lessening one Evacuation is the Encrease of another ; especially where there is such a peculiar Consent, as between the Skin and the Guts.

If so, the Excrement, being retain'd for a Week, or more, by its Weight pressing on the great Artery, hinders the Blood from passing freely to the lower Parts, and so deluges the Brain. Hence those *Deli-riums*,

*riums, Comas, &c.* so frequently threatening at this *Stadium* of the Disease. Further, can we imagine, that the putrid Recrement of the now putrid Blood, join'd, perhaps, with the *Pus* of the internal *Pox*, and having also the Addition of some Part of the morbidick Matter separated by the Glands of the *Fauces*, which is accidentally swallowed, must not be greatly hurtful, by remaining in the Intestines? where growing more and more acrimonious, (as is the Nature even of our most balsamic Juices, when they are *extra Aream Circulationis*, and expos'd to the constant Heat of the Body) it contaminates the Chyle, or Liquors, that are drunk, is re-absorb'd into the Mass of Blood, and becomes a *Pabulum* to the very Fever, which Nature endeavours, even this Way, partly, at least, to throw off.

And, in very Deed, what horribly offensive, fœtid, large Stools do we observe in this Distemper on the Use of Clysters, and more especially after a Purgative? I mean at the State, or in the Declination: So that this very putrid Matter lying long in the Guts, and growing more and more so, becomes at last so virulent, as to corrode them, and brings on that very *Diarrœa*, or Dysentery, which, 'tis so vainly fear'd, would arise from a gentle Cathartic; seeing we are always easily able to check its Force (if Need be) with an Opiate, &c.

How often do we find feverish, hectic Heats proceed from a *Cacochymy* of the first Passages, in Children especially? in which Cafe, a little Rhubarb, or a few gentle stomachick Purgers, shall do more to remove the feverish Disposition than a Pound of the *Cortex*. Indeed, it's common enough to find the *Bark* itself purge gently upon its first Administration: And I'm confident, in some Cases, it hath the better Effect. Have

not we seen some Intermittents cur'd by one seasonable Vomit ? And that not barely by the Shock and Agitation given to the Blood-Vessels, *Genus Nervosum, &c.* and so acting as an Attenuant ; but by throwing off the *Saburra* from the Stomach, which fed the feverish *Paroxysms* : And this is more particularly evident in the Fever frequently supervening a Surfeit. Hence it is, that a small Quantity of the *Bark* sometimes does more after a Vomit, than a much greater cou'd before it. Why, therefore, when there is a Lodgment of putrid Matter in the *Prima Via*, which, in part, at least, feeds the secondary Fever, should not we attempt to carry it off by either gentle Vomiting or Purging, as may be judg'd most convenient ?

It hath, and may be objected to this Practice, that it tends to draw the noxious Humors from the Circumference to the Center ; but to this it hath been answer'd, that the Purging is more especially pleaded for, when the Incrustation is begun, and the Matter too thick to be absorb'd.

If Nature, neither by her own Effort, nor the Help of Art, is capable of keeping the morbid Matter from falling on the more vital Parts ; but, by an unfortunate Translation of it, is like to sink under its Weight : As upon a sudden Retrocession of the Tumor of the Face and Hands ; a premature Suppression of the Salivation, or the like : Doth it not seem necessary to endeavour to carry off the offending Matter by some other Outlet ? As, in the present Case, by the Guts, which are much more easily solicited to a Discharge, than either the Pores of the Skin, the urinary Passes, or the salivary Duds.

Indeed, when the Salivation of course ceases, (in my Opinion) it seems necessary to promote some other Evacuation in its Room. At the same Time, Cardiack, or

Alexipharmick Medicines are in no wise contraindicated by this Method (if judg'd needful). This Way Nature affects in Children, to whom a gentle *Diarrhoea* is commonly of the greatest Service, as proving a happy Substitute to the Salivation in elder Persons.

The following History will evince, how necessary it may be sometimes to evacuate an offending acrimonious Matter lodg'd in the Guts, and that too, even in the Midst of the Suppuration.

About three Months since, I had under my Care a \* Person about 30, ill of the *Small-Pox*. It happen'd, that the 4th Day from the Eruption, he was seiz'd with a violent bilious Colick, to which he had been formerly subject: This threw him into the utmost Agony. His Pox flatt'd and grew pale, as likewise the *Interstices*: His Pulse was extreme languid, and he had a prodigious *Tremor*, with clammy Sweats. I order'd him two Clysters to be thrown up; one assoon as the other was render'd: These gave him five large bilious Stools: After the third Stool, he was tolerably easy: However, I order'd him *Laudan. Solid. Gr. 1*fl.* Croc. Anglic. Gr. iv. Theriac. Andromach 3*fl.* 4*tis*, vel 6*tis horis**, to be wash'd down with a testaceous Julep. He took the *Laudan.* three Times, and slept sound all Night. The next Morning, I found the Pustules round, florid and turgid. The Man got over the Distemper, tho' he relapsed into his Colick some Days after the Turn, which upon purging with *Calomel, &c.* and the Use of *Opiates*, soon left him. This Person, before, and at the Eruption, complain'd of a great Difficulty of Breathing, with a short importunate Cough, and a violent Pain under his *Sternum*; for which Reason I order'd 3*xvi* of Blood to be drawn, which was very fizy.

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\* Tho. Hodge.

The major Part of the *adult Persons*, that had the Unhappiness to be seiz'd with this Distemper, dy'd ; among whom fell an old Gentlewoman of 72 ; a very uncommon Exit for a Person of her Years !

It was a remarkable Instance of the extraordinary Virulence of these *Small-Pox*, that the Women (tho' they had had the *Small-Pox* before, and some very severely too) who constantly attended those ill of the confluent Kind, whether Children, or grown Persons, had generally several Pustules broke out on their Face, Hands, and Breast, exactly resembling the pocky Pustules, which undoubtedly arose from the Matter of the crush'd Pox infecting the Skin in those Parts. Those Pustules arose, matured, and scabb'd off, intirely like the true Pox. † I knew one Woman, that had more than forty on one Side of her Face and Breast ; the Child she attended, frequently leaning on those Parts on that Side. I observ'd, that those, which had the tenderest Skins, and who attended those ill of the worst Sort, had most of these Eruptions. We had a-bundance of Instances of this Nature.

In the Beginning of this Constitution, the *Small-Pox* were much more malignant than they have been for this Month, or two, last past. Indeed, when they raged most severely, some Children had them very favourably, and requir'd no other Physick than to be duly purg'd after them.

† Mr. Hicks's Nurse.

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